

The RISC Process

Chapter 1

Glossary Terms

- Closure
 - IDEM's written recognition of attainment of remedial or screening objectives (closure levels) for chemicals of concern at a particular area
 - limited to COCs evaluated
 - limited to the area evaluated (sampled)
 - representative sampling critical (confidence)

Glossary Terms (cont)

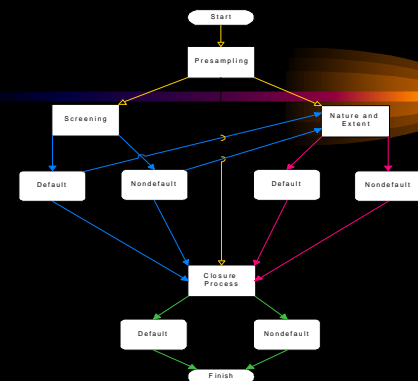
- Default
 - the use of any model, equation, constant, strategy, or process that is prescribed for general application as a RISC standard
- Nondefault
 - any of the above that is *not* prescribed for general application as a RISC standard

Glossary Terms (cont)

- Site
 - geographical area where COC evaluation is desired
- Source area
 - horizontal and vertical geographical area that exceeds default residential soil closure levels
 - 0.5 acre (default)

Glossary Terms (cont)

- COC
 - chemicals that are the focus of screening, investigation or closure
- Constituent
 - COC detected at a concentration lower than the land use-specific closure level
- Contaminant
 - COC detected at a concentration higher than the land use-specific closure level



RISC Exceptions

- Spills
- acute exposures
 - corrosive, flammable or toxic vapors
- contaminated drinking water supply

Default exceptions

- Source areas > 1/2 acre (soil to grdwtr)
- vapors
- preferential pathways (karst, conduit flow)
- ecologically susceptible areas

Concentration Limits

- Soil attenuation capacity (SAC)
- Soil saturation limit (C_{sat})
- metals < 10,000 mg/kg
- free product (must be < solubility limit)

Soil Exposure

- Direct Contact
 - Direct contact with skin (dermal absorption)
 - Inhalation of particulates (ingestion)
 - Inhalation of vapors (volatilized from soil)
 - Soil consumption (ingestion)
- Migration to ground water
 - COC leaches through soil

Soil Pathway Evaluation

- Two separate soil assessments = two different soil closure levels
 - direct contact
 - migration to ground water
- Direct contact is depth dependent
 - 12-15 inches gardening
 - 15 feet building construction

Soil Pathway Evaluation (cont)

- Default requires lesser of direct contact and migration to ground water closure levels
- Simple nondefault
 - eliminate pathway
 - direct contact at depths > 15 feet
 - migration to ground water in top 6 "
 - institutional controls may be appropriate

Ground Water Pathways/Routes

- Volatilization from water to air (inhalation)
- Consumption (ingestion)
- Commercial/industrial assumes reduced consumption & no showering using ground water, and ventilated workplace (OSHA)

Construction Worker Exposure

- Assumes activity within an excavation or trench only
- Different assumptions of duration, frequency and no ground water contact
- CW closure levels listed in Closure tables

Background Considerations

- Discussed in Chapter 1.6 but presented in Chapter 3 Area Screening session